

REMARKS

Claim 1 has been amended. Claims 1-10 remain pending. Reconsideration and reexamination of the application are requested.

The Examiner objected to claim 1 because of an informality. Applicant has corrected the informality according to the Examiner's suggestion.

The Examiner rejected claims 4-8 under 35 U.S.C. 103(a) as being obvious on consideration of Yamashita in view of Tabata.

Yamashita discloses an image sensor apparatus having a light source space 21 and a read space 22 separated from each other by a partition wall 23. An LED element array 5 emits light which is reflected from a reflecting mirror surface 13 so that light rays travel through an acrylic transparent plate or lens 17 (Fig. 3) and through a glass plate 3 to a read surface 4. Light rays then are back scattered through the read space 22 which includes a rod lens 6 focusing the light on a sensor element array 7.

Tabata discloses a light guide 2 which has light sources 1 at an end thereof such that in an apparatus light is appropriately scattered and emitted from a radiating surface 5 toward a read line 6 before being scattered back through a rod lens ray 7 to line sensors 11.

Claim 4 is directed to a line-illuminating device comprising a light guide section and a light condensing section. The light guide section can guide light to allow it to be scattered and then emitted from an emission plane. The light condensing section is in contact with the light guide section such that light emitted from the emission plane is condensed on a document reading surface.

The Yamashita patent does not disclose "a light guide" in the sense of a light guide as specified in claim 4. The term "light guide" (col. 3, line 4) in Yamashita is only used to describe

a clear acrylic plate which has the main function of helping to separate read space from light source space. The separation is required to control dust contamination. Yamashita states:

"... 14 is an acrylic transparent plate provided as a light guide formed as a portion of the partitioning wall 23; 15 is an adhesive for mounting the glass plate 3, the print wiring substrate 8 and the acrylic plate 14 to the resin case 12 so as to seal the interior of the resin case 12..."

(Specification, column 3, lines 3-8)

The acrylic transparent plate 14 is essentially a window for the light source space of case 12. Yamashita discloses no "light guide section" as required for the line-illuminating device of claim 4. In the larger sense of the assembly, Yamashita discloses an LED array formed in a line. The LED array is provided on a print wiring substrate and is used as the light source. Light from the LED array is condensed by the mirror surface 13 and directed through the acrylic plate and an adjacent glass plate to the reading surface. Yamashita also mentions that the acrylic plate can be used as a condenser (column 3, lines 48-54). Essentially, the assembly of Yamashita discloses a mirror and lens construction, wherein both the mirror and the lens may be used as condensers. The interior space of the light source space is empty. There is not motivation in Yamashita to fill the empty space of the assembly in order to create the "line-illuminating device comprising a light guide section and a light condensing section" of claim 4. It is clearly hindsight reconstruction to assume that one skilled in the art would take the light guide 2 of Tabata and consider it in conjunction with the empty space and the acrylic plate 14 in the partition wall of Yamashita to obtain a light guide section and a light condensing.

Although the assemblies of Yamashita, Tabata, and the present invention each achieve a similar result, claim 4 is directed to a component, namely, a "line-illuminating device." The references do not disclose or point to the construction which would make the device of claim 4 obvious. Likewise, the claims which depend from claim 4 are also not obvious.

Applicant acknowledges that claims 1-3 and 10 are allowed and that claim 9 is allowable, but is objected to as being dependent upon a rejected base claim.

The changes made to the claims by the current amendment are attached hereto in a page entitled "Version with Markings to Show Changes Made."

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration and reexamination are requested. Allowance of all pending claims is solicited.

Respectfully submitted,

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Date: May 9, 2003

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S/N 09/915,643

VERSION WITH MARKINGS TO SHOW CHANGES MADEIn the Claims

Claim 1 has been amended to read as follows:

1. (Amended) A bar-shaped light guide designed to allow an illuminating light incident from an end surface to be reflected by the inner surface and to emit [it] the illuminating light from an emission plane formed along the longitudinal direction, characterized in that the cross-sectional shape of the bar-shaped light guide in the direction perpendicular to its longitudinal direction is substantially 1/4 oval of which the end of the major axis side is chamfered, and a side of the bar-shaped light guide along the longitudinal direction comprises an emission plane parallel to a minor axis direction of the oval, a plane parallel to the major axis direction of the oval, a light scattering plane provided with light scattering patterns on a plane formed by chamfering the end of the major axis side of said 1/4 oval, and a reflecting curved plane for reflecting scattered light from the light scattering patterns toward the emission plane.